

ECS Configuration Change Request

Page 1 of 9 Page(s)

1. Originator Evan Winston	2. Log Date: <i>12/12/00</i>	3. CCR #: <i>00-1151</i>	4. Rev: —	5. Tel: 301.925.0348	6. Rm #: 2013	7. Dept. DEV/CO
8. CCR Title: Test Executable 5B.06_STMGT.04 to all sites. Provides fixes for all STMGT NCRs that have been merged to the 5B baseline by 12/07/00. Includes CopyDaemon, FTPClientDaemon hangs, StagingDiskSrv problem, shared memory, and 8mm.						
9. Originator Signature/Date <i>Evan Winston</i> <i>12/12/00</i>		10. Class: <i>II</i>	11. Type: <i>CCR</i>	12. Need Date: 12Dec2000		
13. Office Manager Signature/Date <i>Evan Winston for Tim Orlitz</i> <i>12/12/00</i>		14. Category of Change: Update ECS Baseline Doc.		15. Priority: (If "Emergency" fill in Block 28). Emergency		
16. Documentation/Drawings Impacted: N/A		17. Schedule Impact: N/A	18. CI(s) Affected:DSS/STMGT			
19. Release Affected by this Change: 5B		20. Date due to Customer:		21. Estimated Cost: None - Under 100K		
22. Source Reference: <input checked="" type="checkbox"/> NCR (attach) <input type="checkbox"/> Action Item <input type="checkbox"/> Tech Ref. <input type="checkbox"/> GSFC <input type="checkbox"/> Other: 29080(dupped), 28965(dupped), 27785, 26917(dupped), 26368(dupped), 28874, 28659, 28696 (from TE STMT.03), 28506 (from TE STMGT.02), 28629, 24619, 23435, 28446, 27152, 27821, 26543 (DUPPED), 26373						
23. Problem: (use additional Sheets if necessary) Fixes for the STMGT NCRs on list need to be delivered to the DAACs. 27821, 26543, 26373: Changed the 8mm server to use the cartridge handling system commands and added the SyncStackers script which is executed at startup. The SyncStackers script will put tapes that are left in drives after the server has died not cleanly. 27152: Clean up orphan Staging Disk records (DB Patch 27 and fixes DB Patch 26).						
Box 23. is continued on page 2						
24. Proposed Solution: (use additional sheets if necessary) Test Executable 5B.06_STMGT.04 will provide fixes to the NCRs listed. TE can be loaded on top of STMGT installations of 5B.06. This TE will obsolete the previous 5B.06_STMGT.02, and STMGT.03 and the debug TE, 5B.06_STMGT_JF28965. Files provided for both sgi 8n32 and IRIX65 as well as STMGT Sun Server files.. NOTE: Some of the NCRs listed in this CCR have previously been included with earlier TEs. This is because this TE is delivering the complete STMGT package and not all sites have installed all previous TEs (NCRs marked with ***). ..						
25. Alternate Solution: (use additional sheets if necessary) Take no action now and wait until 5B.07 is available at the DAACs.						
26. Consequences if Change(s) are not approved: (use additional sheets if necessary) DAACs must continue to work around the problems and/or modify operating procedures.						
27. Justification for Emergency (If Block 15 is "Emergency"): Resolves DAAC operational problems and many of the NCRs are on the priority list..						
28. Site(s) Affected: <input type="checkbox"/> EDF <input checked="" type="checkbox"/> PVC <input checked="" type="checkbox"/> VATC <input checked="" type="checkbox"/> EDC <input checked="" type="checkbox"/> GSFC <input checked="" type="checkbox"/> LaRC <input checked="" type="checkbox"/> NSIDC <input checked="" type="checkbox"/> SMC <input type="checkbox"/> AK <input type="checkbox"/> JPL <input type="checkbox"/> EOC <input type="checkbox"/> IDG Test Cell <input type="checkbox"/> Other						
29. Board Comments:			30. Work Assigned To:		31. CCR Closed Date:	
32. EDF/SCDV CCB Chair (Sign/Date): <i>Ronald Miller</i> <i>12/12/00</i>		Disposition: Approved App/Com. Disapproved Withdraw Fwd/ESDIS ERB Fwd/ECS				
33. M&O CCB Chair (Sign/Date): <i>Angie Sean</i> <i>12-12-00</i>		Disposition: Approved App/Com. Disapproved Withdraw Fwd/ESDIS ERB Fwd/ECS				
34. ECS CCB Chair (Sign/Date):		Disposition: Approved App/Com. Disapproved Withdraw Fwd/ESDIS ERB Fwd/ESDIS				

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ECS/EDF/SCDV/M&O

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ADDITIONAL SHEET

CCR #: 00-1151 Rev: — Originator: Evan Winston

Telephone: 301.925.0348 Office: DEV/CO

Title of Change: Test Executable 5B.06_STMGT.04 to all sites. Provides fixes for all STMGT NCRs that have been merged to the 5B baseline by 12/07/00. Includes CopyDaemon,FTPCClientDaemon hangs, StagingDiskSrv problem, shared memory , and 8mm.

Box #23, continued from page 1:

23435: Removes references to STAGINGMONITORCONFIG and makes ARCHRESCONFIG generation only via the extensions button in Subsys Manager in EcsAssist. Removes references in the .cfgparms to unneeded parameters. Makes the value of ARCHRESCONFIG not configurable (Set by the Mkcfgs only) in all applicable .CFG files.

24619: Only insert the tape Id into the table that DDIST reads to get tapes associated with a request after a successful tape write. Previously a tape Id was inserted into the table prior to a successful tape write resulting in multiple tape Id's being associated with a request that were incorrect.

Note: The NCR stated that tape ID's where not displayed via the DDIST gui for requests that spanned multiple tapes. This was not reproducible in the VATC where a 8MM distriton request that spanned multiple tapes was successful, displaying the tapes in the DDIST GUI.

28629: PullMonitor warm start was fixed to not delete files in the pull cache that had yet to be linked to.

29080, 28965, 27785, 26917, 26368: Fixed several problems with CopyDaemon dump/hangs; FTPClientDaemon hangs.

28874, 28659: Fixed Storage managment hang scenarios.

28696: Fixed core dump in EcDsStStagingDiskServer during Staging Disk Destroy.

28506: Fixed leak of Shared Memory partitions.

28446: Modified DsStFileParameters.C to parse the return from a stored procedure to accept only one row. The database has an error and multiple rows were returned. Multiple rows exist because a table restraint was removed by the DAAC operator via SQL commands.

CONTENT:

CM: PLEASE,

build SGI (6n32) TAR file for the listed .pkg from current 5B baseline and provide to SMC:

.EcDsStArchive.pkg
.EcDsStDatabase.pkg
.EcDsStIngestFtp.pkg
.EcDsStPullMonitor.pkg
.EcDsStFtpDisNoBrowse.pkg

build SGI (IRIX65) TAR file for the listed .pkg from current 5B baseline and provide to SMC:

.EcDsStArchive.pkg
.EcDsStDatabase.pkg
.EcDsStIngestFtp.pkg
.EcDsStPullMonitor.pkg
.EcDsStFtpDisNoBrowse.pkg

build SUN TAR file for the listed .pkg files from the current 5B baseline and provide to the SMC:

.EcDsStGUI.pkg
.EcDsStMediaDis.pkg
.EcDsStD3.pkg

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SMC: Receive the TAR files and make available to the DAACs, PVC and VATC.

DAAC Install Instructions:

TE can be loaded on top of STMGT installations of 5B.06. This TE will obsolete the previous 5B.06_STMGT.02, STMGT.03 and the debug TE, 5B.06_STMGT_JF28965.

Important NOTE !!!!!!!

For this install you will use the instructions below and then be using parts of the STMGT Install Instructions a copy is attached to this CCR and a copy will be attached to the Delivery Notice e-mail Message for this TE.

1. Get TAR Files from SMC distribution;

Make sure you select the SUN TAR file as well as the proper SGI TAR files—either for 6n32 or IRIX65.

2. UNTAR the files and copy to the staging area using the Setup.ksh file. Be sure to select "Y" when prompted for "Update ECS Assist Common Files" to get the latest version of ECS ASSIST. THIS MUST BE RUN AS ROOT.

3. Modify the file permissions as specified below

```
cd/<distribution_directory>/<stage_directory>/SUN/CUSTOM/dbms  
chmod 744 DSS/EcDsStDbLogin
```

4. On a SUN host, use E.A.S.I. to perform automated installation of the STMGT SGI and SUN hosts as follows:

- a. Select the Mode to be installed
- b. Enter the location of the staged files
- c. Select CUSTOM and Click Next
- d. Hold down the SHIFT Key and select each of the STMGT SGI and SUN hosts. Click Next
- e. Select Install as the Installation Phase and Click Next
- f. Select STAGE as the Source File Location . Click Next
- g. Review the packages and hosts as displayed to ensure that they are going to be installed appropriately. Click Next
- h. Click COMM and ensure all hosts turn green, signaling they are communicating with ECS E.A.S.I.
- i. Click INSTALL and monitor each host. Ensure each SGI and SUN host turns green signaling a successful installation.

5. Now Refer to the attached STMGT Configuration and Initialization sheets (these are attached to this NCR and are attached to the Delivery Notice e-mail message for this TE) for the remaining install instructions.

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STMGT Configuration and Initialization

Before following these procedures, install the STMGT packages via EASI as described in the TE instructions. In addition, in order to ensure that the 8MM tape server will work correctly, verify that the correct drivers are installed.

To ensure that the ehs drivers are installed:

1. Obtain the device paths of the stackers (e.g. /dev/chg0)
 2. As cshared, issue the following command:
`chs -f <device path> tiny`
 3. If the correct drivers are installed, the stacker inventory will further information.

These procedures are order-dependent. Each individual stem should be countered before the follow-on stem is attempted.

Replace all occurrences of the string <MODE> with the mode into which you are performing the installation i.e. TS1, TS2 or OPS. Replace all occurrences of <stage_directory_location> with the path name of the staging directory provided to you by the installation lead. Replace all occurrences of <server_manager> with the UNIX account name that is used to run your servers. Normally this is "cmshared" or "allnode". Replace all occurrences of <mode> with the mode name in lower case letters into which you are performing the installation.

CONTINUATION^a

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- Run mkcfg (oneira distribution box only)**

 - a) Run a mkcfg via ECS. Assist **only** on the box which hosts the 8MM server. A new tab for the SyncStackerMkcfg has been added.
 - a) The SyncStackerMkcfg requires the following parameters for the STMGT database:

-DBUSER	EcDsSt8MMServer
-DBPASSWORD	Get value of password from the contents of the /usr/ecst/<MODE>/CUSTOM/dbms/DSS/EcDsStDbLogin file)
-DBSERVER	(e.g. p0acg04_srvr)
-DBNAME	(e.g. stmgdb1_TS2)

The SyncStackerMkcfg will create an executable script called SyncStacker in the /usr/eecs/<MODE>/CUSTOM/Utilities directory that the EcDsSt8MMServer will execute at start up. More information about the SyncStacker script is provided in the “Notes” section below.

 - b) Remove all .CFG files in the /usr/eecs/<MODE>/CUSTOM/cfg directory on this box.

Small Registry Patch

- From any STMGT machine, patch the registry database using the repatch file:

 - a) From the ECS Assist Subsystem Manager, select the appropriate Mode, Subsystem, and Component from the main window.
 - b) Select "Registry Data Patch" from the "Tools" menu. An "Apply Registry Data Patch" window will appear.
 - c) In the "Apply Registry Data Patch" window, enter the name of the SQL server in the "Registry Database Server:" box.
 - d) Enter the registry database DBO ID and password, respectively, in the next two boxes.
 - e) In the next ("Registry DB Name:") box, be sure to enter the name of the registry database [EcsRegistry\<mode>] and press the <ENTER> key. This will cause ECS Assist to connect to the registry database and populate the drop-down menu associated with the next field ("Tree to patch:").
 - f) Use the drop-down menu to select the appropriate registry tree that is being patched (if you don't know which tree to select, bring up the registry GUI and verify which tree is mapped to the mode that you are updating).

STMGT Configuration and Initialization (continued)

- _____ g) Finally, click on the "Select Patch File" button to bring up the "File Selection Dialog" window.
- _____ h) Navigate through this window to find the .xgpatch file (note: if your installation was successful, it should appear in the /usr/eecs/<MODE>/CUSTOM/installed/DSS/string directory).
- _____ i) Highlight the .xgpatch file in the window and select <OK>.
- _____ j) Verify that the appropriate information is indicated in the "Patch File:" box in the "Apply Registry Data Patch" window and select <OK>.

At this point, the registry patch will be applied. Monitor the output via ECS Assist for any warning or error messages as the patch is run.

DATABASE:

1. Determine the current mode of the STMGT database

```
> isql -S<server_name>-U<db_user_name>-P<db_user_password>
> use stmgtdb1[<MODE>]
> go
> select * from EcDbDatabaseVersions where EcDbCurrentVersionFlag="Y"
> go
Note the value of EcDbComments.
> quit
```

2. Patch the STMGT database:

- _____ a) Review any Workarounds for the Database phase.
- _____ b) Obtain the required database parameters:

Table A - Database Parameters

PARAMETER	VALUE
DBO ID, db_user_name	stmgtdb1
Password, db_user_password	<DBO password>
SQL Server Name, server_name	xxXXXnn_SRVT
Database Name	stmgtdb1[<MODE>]

Where stmgtdb1 is the database name in OPS mode, and stmgtdb1_<MODE> is the database name in TS1 and TS2.

- _____ d) Using EcCoAssist execute the DbPatch function to patch the STMGT/DDIST database. For DbPatch, you must iteratively update the database from the current patch level (5B25.25 is the baseline for 5B.06) through the installation patch level (5B27.27 for this TE). To update to "STMGT/Drop 5B27.27" from "STMGT/Drop 5B25.25":

STMGT Configuration and Initialization (continued)

Table B - Database Patch Table

CURRENT DB VERSION	ACTION
STMGT/Drop 5B25.25	Run DbPatch for 5B26.26 and then run again for 5B27.27.

Note that these patch identifiers ("STMGT/Drop 5B25.25", etc.) are the internal subsystem patch identifiers; this subsystem identifier is embedded in the EcDbComments field of the EcDbDatabaseVersions table.

- e) Select file .dbparms within the select a file box, then select **OK** in the Database Config box.
- f) Enter the parameters in the Database Parameters (Table A above).
- g) Select **Ok** to start the database patch.
- h) Execute the EcDbDDMUpdateVersion\Table.sql script file that is under the directory "/usr/ecst/{MODE}/CUSTOM/dbms/COM/DBAdmin." The parameters to be passed are MODE USERNAME DSQUERY DBNAME. You will be prompted for the PASSWORD.

VERIFICATION:

- a) Review the file EcInDbPatch.log in /usr/ecst/{MODE}/CUSTOM/logs for any error or warning messages.
- b) Verify that the current internal subsystem patch identifier is "STMGT/Drop 5B27.27" and the current EcDbDropVersion is "5B.06".

```
> isql -S <server_name> -U <db_user_name> -P <db_user_password>
> use stmgtdb1 [<MODE>]
> go
> select * from EcDbDatabaseVersions where EcDbCurrentVersionFlag='Y'
> go
Check the values of EcDbComments and EcDbDropVersion.
> quit
```

Have the DBA verify the database changes through the DbDese script for this subsystem.

MEDIA SERVERS

- a) The ownership and permissions for the media server executables (EcDs8MMServer and EcDsSD3Server) must be set so that they will execute as root. The following must be executed by root. From the directory containing the executable, issue the following commands from the Unix command prompt:

```
chown root EcDsSD3Server
chmod u+s EcDsStD3Server
```

NOTE: The 8MM server file ownership should no longer be changed to root. Once these commands have been executed, the media servers may be started or killed without root privileges.

STMGT Configuration and Initialization (continued)

- _____b) Change the ownership of the EcDsStFTPClientDaemon binary (on all platforms on which it is installed) to the account that will be running the EcDsStFtpDissServer and EcDsStngestFtpServer processes – e.g., if the STMGT FTP servers will be run by cmshared, execute the command (some sites may wish to change group permissions as well):

```
chown cmshared /usr/ecs/<mode>/CUSTOM/bin/DS/S/EcDsStFTPClientDaemon
```

Change the permissions if they are not currently listed as '-rwsr-x--':

```
chmod 4750 EcDsStFTPClientDaemon
```

- _____c) Change the ownership of the EcDsStCopyDaemon binary (on all platforms on which it is installed) to the account that will be running the EcDsStArchiveServer and EcDsStStagingMonitorServer processes. E.g., if the STMGT Archive server will be run by cmshared, execute the command:

```
chown cmshared /usr/ecs/<mode>/CUSTOM/bin/DS/S/EcDsStCopyDaemon
```

Change the permissions if they are not currently listed as '-rwsr-s--':

```
chmod 6750 EcDsStCopyDaemon
```

START SERVERS:

- _____a) Verify that SHARED mode subagent configuration files exist before starting any servers.
_____b) Login as <server_manager> (cmshared or allmode at most sites) and change to the /usr/ecs/<MODE>/CUSTOM/utilities directory.
_____c) Start each server using the appropriate start script (generally <server_name>Start).
_____d) Use Whazzup to monitor server status.

START GUIs:

- _____a) From the command line, start the GUIs which are a part of your component on the appropriate host(s):

```
cd /usr/ecs/<MODE>/CUSTOM/utilities  
EcDsSmgtGUIStart <MODE>
```

POST-INSTALLATION:

None

WORKAROUNDS:

None

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STMGT Configuration and Initialization (continued)

Notes:

SyncStacker script

The SyncStackerMkcfg will create an executable script called SyncStacker in the /usr/ecsl/<MODE>/CUSTOM/utilities directory that the EcDsSi8MMServer will execute at startup. SyncStacker moves any tape that is already in a drive at startup back to its original slot and updates the database to reflect the change.

SyncStacker does not actually synchronize the database contents with the actual physical configuration of the stacker. SyncStacker instead relies on the database keeping an accurate picture of the stacker configuration. It is only useful if the database has been originally been accurately configured.

SyncStacker is useful when the EcDsSi8MMServer dies or is killed on purpose while there are requests being serviced by the stackers. Upon startup of the EcDsSi8MMServer, the server will sleep for a number of seconds in order to give any tapes that may be in the drives time to rewind. The script will then be executed to move the tapes back into their slots and updated the database to reflect the new configuration.

To verify that the database accurately depicts the stacker configuration, access the STMGT database and review the DsStStacker, DsStDevice, and DsStSlot tables:

Common DB values to check for:

DsStStacker Table

Status:
0 - Offline
1 - Online

Stackers that are to be used should have a value of 1 - Online

DsStDevice Table

DriveCurrentSlot:
Status:
0 - Offline
1 - Online
2 - Loaded
should be -1 if no tape is in drive
else the slot # of the tape 1 - 10
CurrentStatus
0 - Unallocated/Free
1 - Allocated/Reserved

Devices that are to be used should have a value of 1 - Online a DriveCurrentSlot value of -1 and a CurrentStatus of 0. Note updates of DriveCurrentSlot must be done on a per drive basis

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STMGT Configuration and Initialization (continued)

<u>DsSISlot Table</u>	
SlotStatus	SlotUse:
0 - Offline	0 - Read Only
1 - Empty	1 - Read/Write
2 - Loaded	
3 - Active	
4 - Complete	

Tapes that are available for distribution should have a value of 2 for SlotStatus, 1 for SlotUse, and 0 for SlotCurrentStatus

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